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1980
INLAND WATERBORNE COMMERCE STATISTICS

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Introduction

Dear Friend:

The barge and towing industry is a vital segment of the U.S. transportation system. It consists of some 1,800 companies operating on a system of 25,543 miles of navigable inland and intracoastal waterways, serving 87 percent of major U.S. cities. It operates a fleet of 4,693 towboats and tugboats with a combined horsepower of 7.1 million, powering a fleet of 31,592 barges with a capacity of 44.9 million tons.

This book, Inland Waterborne Commerce Statistics, 1980, illustrates the growth and strategic importance of the industry by showing total tonnages and total ton-miles moved by the entire system and on each major navigable river, intracoastal waterway and canal.

A description of each waterway, with its navigable length, precedes each discussion. Net tons and ton-miles are shown for the early and middle 1970s, as well as for 1980. In the center of this book is a map, showing locations for each of the waterways discussed.

This book also shows that in 1980, the last year for which final figures are available, barges carried more than 667.2 million tons of freight, or about 62 percent of the over one billion tons of total domestic waterborne traffic.

It demonstrates that over 69 percent of the products transported by barge are energy-related, i.e., 39.3 percent consist of petroleum and petroleum products and 21.2 percent consist of coal and lignite.

In addition to energy products, the industry moves building materials (12.9 percent); grain and grain products (10.9 percent); chemicals (7 percent); and, in substantial quantities, more than 100 other kinds of bulk materials, including iron and steel products, lime, fertilizer, logs, marine shells, etc.

The industry has three inherent advantages to offer shippers, receivers and the public. It is the lowest cost, most energy efficient and safest transportation mode.

The data are compiled from the latest reports issued by the Waterborne Commerce Statistics Center of the Army Corps of Engineers. The compilations and comparisons are prepared by The American Waterways Operators, Inc., and are published annually as a public information service.

Sincerely,

Joseph Farrell
President
The American Waterways Operators, Inc.

COMMERCIALLY NAVIGABLE WATERWAYS OF THE UNITED STATES BY LENGTHS AND DEPTHS[1]

	Lengths in Miles of Waterways					
Group	Under 6 ft.	6 to 9 ft.	9 to 12 ft.	12 to 14 ft.	14 ft. & Over	Total
Atlantic Coast Waterways	1,426	1,241	584	938	1,581	5,770
Atlantic Intracoastal Waterway-Norfolk, VA, to Key West, FL	—	65	65	1,104	—	1,234
Gulf Coast Waterways	2,055	647	1,133	79	378	4,292
Gulf Intracoastal Waterway-St. Marks, FL, to the Mexican Border	—	—	—	1,137	—	1,137
Mississippi River System	2,020	969	4,957	740	268	8,954
Pacific Coast Waterways	730	498	237	26	2,084	3,575
Great Lakes	45	89	—	8	348	490
All Other Waterways	76	7	—	1	7	91
GRAND TOTAL	6,352	3,516	6,976	4,033	4,666	25,543

[1] The mileages in this table represent the lengths of all navigable channels of the United States, including those improved by the federal government, other agencies, and those that have not been improved but are usable for commercial navigation.

1980 FREIGHT TON MILES BY MODE
(MILLIONS)

Mode	1980 Ton Miles	Percent
Air carrier	4,271	.2
Oil pipeline	579,000	24.4
Rail	918,958	38.7
Highway	560,000	23.6
Inland waterways[1]	310,845	13.1
TOTAL	2,373,074	100

[1]Exclusive of Great Lakes

Source: National Transportation Statistics, Department of Transportation

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES OPERATED FOR THE TRANSPORTATION OF FREIGHT AS OF DECEMBER 31, 1980

Types of Vessels	Mississippi River System and the Gulf Intracoastal Waterway	Atlantic, Gulf and Pacific Coasts	Great Lakes System	Total
SELF-PROPELLED				
Towboats and Tugs				
Number of Vessels	2,945	1,602	146	4,693
Horsepower	4,637,667	2,364,804	144,105	7,146,576
NON-SELF-PROPELLED				
Dry Cargo Barges and Scows				
Number of Vessels	22,586	4,631	209	27,426
Cargo Capacity (net tons)	29,261,091	4,890,079	335,681	34,486,851
Tank Barges				
Number of Vessels	3,445	688	33	4,166
Cargo Capacity (net tons)	7,147,532	3,172,831	67,902	10,388,265
Total Non-Self Propelled				
Number of Vessels	26,031	5,319	242	31,592
Cargo Capacity (net tons)	36,408,623	8,062,910	403,583	44,875,116

Source: U.S. Army Corps of Engineers

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES OPERATED FOR THE TRANSPORTATION OF FREIGHT FOR THE YEARS 1977-1980

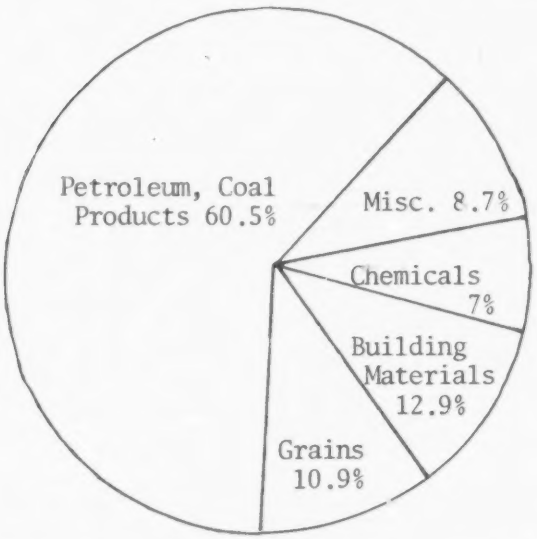
Types of Vessels	1977	1978	1979	1980
SELF-PROPELLED				
Towboats and Tugs				
Number of Vessels	4,379	4,380	4,492	4,693
Horsepower	6,161,348	6,390,438	6,646,141	7,146,576
NON-SELF-PROPELLED				
Dry Cargo Barges and Scows				
Number of Vessels	24,937	24,037	25,420	27,426
Cargo Capacity (net tons)	29,454,921	29,838,851	32,093,068	34,486,851
Tank Barges				
Number of Vessels	3,770	3,946	4,000	4,166
Cargo Capacity (net tons)	9,519,840	9,467,565	10,334,677	10,388,265
Total Non-Self-Propelled				
Number of Vessels	28,707	27,983	29,420	31,592
Cargo Capacity (net tons)	38,974,761	39,306,416	42,427,745	44,875,116

Source: U.S. Army Corps of Engineers

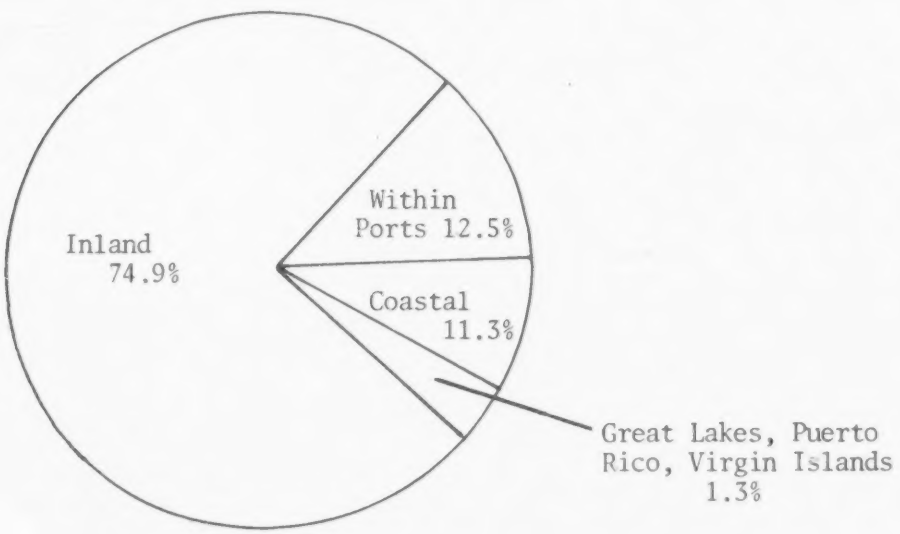
THE SCOPE OF THE BARGE AND TOWING INDUSTRY

The barge and towing industry carried 667.2 million tons of freight in 1980, 62 percent of total domestic marine traffic. Barge traffic moves on the inland waterways, within ports, on the coastal waters of the United States, on the Great Lakes and between ports in Puerto Rico and the Virgin Islands.

BARGE TRANSPORTATION BY COMMODITY



BARGE TRANSPORTATION BY WATERWAY SYSTEM



BARGE TRAFFIC AND KEY ECONOMIC INDICATORS

Year	Barge Traffic (Millions of tons)	GNP ($ billion) (1972)	Industrial Production Index (1967=100)
1970	562.2	1,086	108
1971	581.3	1,122	110
1972	623.1	1,186	120
1973	625.1	1,255	130
1974	622.3	1,248	129
1975	610.0	1,234	118
1976	637.6	1,300	131
1977	640.2	1,372	138
1978	662.2	1,437	146
1979	656.6	1,483	153
1980	667.2	1,474	147

Sources: Waterborne Commerce of the United States, U.S. Army Corps of Engineers, annual, & Waterborne Commerce Statistics Center, U.S. COE
Survey of Current Business, Bureau of Economic Analysis, U.S. Dept. of Commerce, monthly
Statistical Abstract, Bureau of the Census, U.S. Dept. of Commerce, annual

DOMESTIC BARGE TRAFFIC[1]
1970-1980
(Thousands of net tons)

Year	Grains	Coal	Petroleum and Products	Sand, Gravel and Stone	Chemicals and Fertilizers	Total All Commodities
1970	27,052	122,859	215,865	71,067	43,471	562,156
1971	28,324	113,963	232,641	79,460	46,496	581,314
1972	36,320	123,846	251,004	76,918	51,327	623,063
1973	35,984	120,711	256,504	78,705	49,846	625,146
1974	39,785	122,582	245,151	73,738	51,570	622,319
1975	44,434	130,683	244,000	65,851	46,612	610,039
1976	54,747	132,578	264,436	59,163	48,628	637,641
1977	52,324	133,992	270,942	56,793	54,182	640,163
1978	58,730	120,825	281,474	69,350	53,002	662,197
1979	58,991	135,953	260,473	67,670	56,316	656,648
1980	52,140	141,702	262,000	59,252	56,429	667,222

[1] Includes not only inland waterways traffic, but also coastwise shipments by barge. Thus, total annual tonnages will be somewhat higher than those reported on the following page.

TRAFFIC TRANSPORTED ON INLAND WATERWAYS OF UNITED STATES
(Exclusive of Great Lakes)

Year	Net Tons Of 2,000 Pounds[1]	Ton-Miles
1940	183,417,791	22,411,961,000
:	:	:
1965	472,480,483	152,812,240,000
1966	489,066,210	164,528,798,000
1967	500,912,733	174,582,978,000
1968	520,904,639	179,336,707,000
1969	548,481,358	187,666,323,000
1970	553,598,222	204,084,966,000
1971	560,470,417	210,003,291,000
1972	597,255,337	229,754,230,000
1973	596,459,513	232,307,988,000
1974	599,219,554	247,430,888,000
1975	582,211,482	243,038,688,000
1976	607,703,665	267,216,851,000
1977	612,149,130	277,580,717,000
1978	624,015,527	290,396,521,000
1979	628,082,832	302,902,779,000
1980	629,162,723	310,845,090,000

1 Known duplications resulting from reporting of identical shipments over two or more waterways have been eliminated except that the figures for 1965 and subsequent years represent originated traffic.

COASTAL AND COASTWISE TRAFFIC[2]

Year	Net Tons Of 2,000 Pounds	Ton-Miles
1958	194,050,174	304,770,000,000
:	:	:
1965	201,508,107	302,545,000,000
1966	208,374,966	306,766,000,000
1967	214,646,527	310,429,000,000
1968	214,250,535	304,480,000,000
1969	216,707,773	300,948,000,000
1970	238,440,385	359,784,000,000
1971	242,916,056	360,205,000,000
1972	242,660,087	351,509,000,000
1973	236,794,660	327,649,000,000
1974	233,358,124	322,802,209,000
1975	231,932,437	315,845,946,000
1976	236,278,624	322,932,250,000
1977	248,083,336	343,536,591,000
1978	305,342,824	540,373,236,000
1979	304,665,522	532,290,272,000
1980	329,608,613	631,149,247,000

2 Applies to domestic traffic receiving a carriage over the ocean or the Gulf of Mexico, e.g., New Orleans, to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, or Puerto Rico to Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also termed coastwise.

PRINCIPAL COMMODITIES TRANSPORTED ON THE INLAND WATERWAYS OF THE UNITED STATES (EXCLUSIVE OF THE GREAT LAKES) IN NET TONS OF 2,000 POUNDS—CALENDAR YEARS 1978, 1979 AND 1980

Commodity	1978	1979	1980
Grain and grain products	43,751,953	45,007,504	51,466,545
Soybeans	14,207,752	13,253,677	16,117,949
Fresh fish and shellfish	1,430,870	1,953,432	1,182,905
Menhaden	948,205	420,367	123,332
Marine shells, unmanufactured	10,319,703	8,801,217	9,241,183
Iron ore and concentrates	5,386,658	5,663,949	4,479,286
Aluminum ore and concentrates	627,565	443,301	493,841
Manganese ores and concentrates	708,111	940,354	510,122
Nonferrous ore concentrates, n.e.c.	880,127	988,411	720,312
Coal and lignite	117,575,202	133,245,659	138,513,379
Crude petroleum	56,599,083	52,755,936	47,608,856
Limestone	2,549,916	3,088,437	4,175,761
Sand, gravel and crushed rock	65,640,164	65,735,803	56,146,815
Clay and structural clay products	1,947,777	2,020,384	1,323,653
Sulphur, dry and liquid	4,293,018	4,996,681	4,796,450
Nonmetallic minerals, n.e.c.	5,616,421	5,054,963	4,952,326
Sugar	893,247	703,601	817,058
Molasses	676,105	526,947	415,836
Vegetable oils, margarine, shortening	1,346,101	1,369,295	1,570,339
Tallow, animal oils and fats	306,414	347,591	488,837
Logs	654,159	635,885	705,666
Rafted logs	17,120,788	17,032,909	16,735,458
Pulpwood, log	1,721,884	1,599,822	1,431,776
Lumber and wood products, exc. furniture	2,164,617	1,969,177	2,264,706
Pulp	855,682	765,990	946,891
Paper and paper products	1,874,058	1,735,791	1,815,200
Sodium hydroxide	3,770,050	3,886,218	3,391,667
Crude tar, oil, gas products	1,569,476	1,693,415	1,363,495
Alcohols	2,479,917	2,536,614	2,394,883
Benzene and toluene	3,404,763	3,515,067	3,438,349
Sulphuric acid	2,158,086	2,045,742	2,223,203
Basic chemicals and products, n.e.c.	15,150,090	17,588,107	17,373,927
Fertilizer and fertilizer materials	8,323,339	8,749,652	9,240,973
Gasoline	37,814,677	34,452,879	35,437,397
Jet fuel	5,100,481	4,748,271	4,588,997
Kerosene	2,001,944	1,790,257	1,637,914
Distillate fuel oil	39,424,821	36,224,816	36,283,044
Residual fuel oil	83,710,603	78,710,334	81,023,439
Lubricating oils and greases	2,667,341	2,653,743	2,366,556
Naphtha, petroleum solvents	3,299,798	4,597,114	4,598,952
Asphalt tar and pitches	5,139,190	4,243,325	3,407,528
Coke, petroleum coke	3,286,315	3,754,875	3,929,544
Liquefied gases	1,060,898	901,660	987,918
Other petroleum and coal products	2,026,782	2,709,349	2,901,651
Building cement	3,938,671	4,133,153	3,767,641
Lime	814,437	1,033,766	1,128,344
Miscellaneous nonmetallic mineral products	590,312	496,664	198,562

(continued)

Commodity	1978	1979	1980
Slag	861,801	661,245	774,987
Iron and steel products (w/ferroalloys)	7,093,853	7,909,072	6,971,090
Fabricated metal products	205,434	211,214	204,552
Miscellaneous manufactured products	1,929,417	1,589,753	1,396,817
Iron and steel scrap	2,231,688	2,550,006	2,891,839
Waste and scrap, n.e.c.	15,953,166	13,903,355	15,564,979
Water	2,845,873	3,121,395	2,900,770
Other commodities	5,066,724	6,614,688	7,729,223
GRAND TOTAL	624,015,527	628,082,832	629,162,723

Alabama River

SECTION: From Wetumpka, Alabama, to mouth at confluence with Mobile River - 313 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	1,333,058	120,520,255
1972	1,582,028	112,959,812
1973	2,149,004	151,317,633
1974	2,120,533	157,812,590
1975	2,247,812	190,050,504
1976	1,714,381	154,396,376
1977	1,684,117	138,769,529
1978	1,966,874	163,979,844
1979	2,028,366	230,942,373
1980	1,501,448	153,277,753

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Soybeans	40,196
Crude petroleum	20,540
Sand, gravel, crushed rock	1,073,457
Pulpwood, log	71,996
Wood chips, staves, moldings	152,825
Fertilizers	35,993
Residual fuel oil	45,667
Miscellaneous	60,774
GRAND TOTAL	1,501,448

Allegheny River

SECTION: From Pittsburgh, at the confluence with the Ohio River, tó above East Brady, Pennsylvania, improved portion - 72 miles

CONTROLLING DEPTH: 9 feet; open channel portion above East Brady

TOTAL ANNUAL TRAFFIC

	Improved Portion		Open Channel Portion	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	5,946,165	80,643,101	212,500	1,087,000
1972	5,425,369	80,024,511	72,892	422,034
1973	5,317,340	83,101,087	167,060	810,420
1974	5,532,052	87,302,440	130,332	808,110
1975	5,362,206	85,780,386		
1976	4,981,158	78,598,435		
1977	5,084,990	89,243,482	(No Commerce reported)	
1978	4,404,714	79,462,989		
1979	4,819,088	89,072,521		
1980	5,012,399	74,903,911		

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Improved Portion
Manganese ores, concentrates	1,847
Nonferrous ores, concentrates, n.e.c	30,799
Coal and lignite	1,348,847
Sand, gravel, crushed rock	2,829,528
Clay and structural clay products	22,689
Nonmetallic minerals, n.e.c.	62,552
Wheat flour and semolina	39,350
Alcohols	64,051
Basic chemicals and products, n.e.c.	69,775
Gasoline	1,472
Kerosene	3,136
Distillate fuel oil	35,328
Residual fuel oil	13,311
Lubricating oils and greases	191,455
Naphtha, petroleum solvents	9,416
Asphalt, tar and pitches	104,525
Coke, petroleum coke	37,678
Other petroleum and coal products	11,297
Ferroalloys	36,463
Iron and steel products	2,823
Machinery, except electrical	1,767

(Continued)

Commodity	Net Tons Improved Portion
Iron and steel scrap	64,822
Miscellaneous	29,468
GRAND TOTAL	5,012,399

Apalachicola, Chattahoochee and Flint Rivers

SECTION: The Apalachicola River from Apalachicola Bay to the confluence of the Chattahoochee and Flint Rivers, the Chattahoochee River to Columbus, Georgia (268 miles), and the Flint River to Bainbridge, Georgia (29 miles) - Total: 297 miles

* Gulf Intracoastal Waterway through-traffic over lower 6 miles of the Apalachicola River is excluded

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	898,087	97,957,858
1972	1,025,275	108,210,390
1973	1,024,890	124,189,253
1974	951,026	103,370,745
1975	811,862	85,902,387
1976	1,030,399	106,807,621
1977	1,070,165	135,546,345
1978	873,353	102,994,535
1979	889,884	97,187,372
1980	783,656	81,955,756

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Soybeans	35,452
Sand, gravel, crushed rock	336,169
Crude tar, oil, gas products	7,009
Benzene and toluene	7,261
Basic chemicals and products, n.e.c.	62,561
Fertilizer and fertilizer materials	153,019
Miscellaneous chemical products	1,320
Gasoline	47,498
Distillate fuel oil	35,722
Lubricating oils and greases	2,330

(Continued)

Commodity	Net Tons
Naphtha, petroleum solvents	12,708
Asphalt, tar and pitches	66,276
Miscellaneous	16,331
GRAND TOTAL	783,656

Atlantic Intracoastal Waterway

SECTION: From Norfolk, Virginia, to St. Johns River at Jacksonville, Florida - 739 miles

CONTROLLING DEPTH: 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,662,166	570,922,609
1972	4,361,217	691,882,360
1973	3,931,592	581,126,564
1974	3,537,217	531,899,709
1975	3,218,552	474,560,638
1976	4,470,292	589,392,930
1977	4,803,739	616,303,126
1978	5,094,836	569,411,311
1979	5,066,145	593,329,628
1980	3,996,144	484,204,055

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Grain and grain products	--	92,309
Soybeans	--	64,430
Fresh fish, except shellfish	--	13,226
Shellfish, except prepared	--	27,332
Menhaden	--	16,499
Iron ore and concentrates	--	353,581
Nonferrous ores, concentrates, n.e.c.	4,983	11,084
Sand, gravel, crushed rock	--	256,115
Clay and structural clay products	--	--
Sulphur, liquid	--	389,456
Animal oils and fats, n.e.c.	--	13,580
Miscellaneous food products	--	15,609
Basic textile products	--	2,490
Pulpwood, log	--	447,666
Wood chips, staves, moldings	--	43,249

(Continued)

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway
Pulp	--	122,570
Paper and paperboard	--	58,930
Sodium hydroxide	--	36,919
Fertilizer and fertilizer materials	5,571	416,679
Gasoline	--	47,018
Jet fuel	--	240,040
Distillate fuel oil	60	28,708
Coke, petroleum coke	--	24,437
Residual fuel oil	--	860,455
Naphtha, petroleum solvents	--	42,214
Iron and steel products	70	84,980
Aluminum and alloys, unworked	--	--
Fabricated metal products	5,183	4,740
Machinery, except electrical	3,065	5,189
Electrical machinery and equipment	--	1,995
Motor vehicles, parts, equipment	--	15
Aircraft and parts	--	--
Commodities, n.e.c.	1	102,521
Ships and boats	1,038	3,215
Iron and steel scrap	--	28,305
Miscellaneous	9,994	110,623
GRAND TOTAL	29,965	3,966,179

Atlantic Intracoastal Waterway

SECTION: From St. Johns River at Jacksonville to Miami, Florida - 349 miles

CONTROLLING DEPTHS: 10 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	869,289	25,217,290
1972	837,852	64,067,389
1973	1,182,475	44,880,349
1974	1,505,534	33,208,570
1975	1,228,098	24,462,086
1976	1,393,370	29,540,456
1977	1,269,218	36,537,889
1978	1,187,362	18,429,315
1979	1,475,654	29,523,137
1980	1,214,075	29,349,629

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway
Fresh fish, except shellfish	--	2,210
Shellfish, except prepared	--	920
Ice	--	1,953
Gasoline	--	15,615
Distillate fuel oil	972	2,583
Residual fuel oil	--	1,116,763
Liquefied gases	1,747	--
Miscellaneous nonmetallic mineral products	--	11,116
Iron and steel products	1,077	1,157
Fabricated metal products	593	150
Machinery, except electrical	2,865	6,030
Electrical machinery and equipment	--	2,800
Miscellaneous	26,415	19,109
GRAND TOTAL	33,669	1,180,406

Black Warrior, Warrior and Tombigbee River System

SECTION: From mouth of Chickasaw Creek to mile 427 on Mulberry Fork, mile 427.6 on Sipsey Fork, and mile 407 on Locust Fork of the Black Warrior River

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,101,223	3,728,750,287
1974	15,548,253	4,247,424,309
1975	12,797,822	3,267,425,580
1976	14,705,635	4,403,614,065
1977	15,287,119	4,531,485,349
1978	14,600,815	3,971,917,496
1979	15,311,328	4,403,501,022
1980	16,708,082	5,175,059,109

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Inland Waterway
Grain	18,484
Soybeans	141,163
Marine shells, unmanufactured	339,958
Iron ore and concentrates	2,426,310
Manganese ores, concentrates	37,143
Coal and lignite	9,646,079
Crude petroleum	513,235
Limestone	457,446
Sand, gravel, crushed rock	880,757
Clay and structural clay products	119,067
Nonmetallic minerals, n.e.c.	142,905
Logs	101,480
Pulpwood, log	171,609
Wood chips, staves, moldings	152,825
Sodium hydroxide	224,179
Alcohols	16,792
Crude tar, oil, gas products	26,040
Benzene and toluene	11,560
Sulphuric acid	25,151
Basic chemicals and products, n.e.c.	63,973
Fertilizers and fertilizer materials	73,928
Gasoline	21,021
Distillate fuel oil	28,159
Residual fuel oil	532,903
Lubricating oils and greases	24,312
Naphtha, petroleum solvents	24,534
Asphalt, tar and pitches	47,834
Other petroleum products	12,754
Iron and steel products	100,441
Machinery, except electrical	16,996
Pig iron	5,053
Fabricated metal products	11,443
Ferroalloys	14,468
Iron and steel scrap	241,950
Miscellaneous	36,130
GRAND TOTAL	16,708,082

Calumet-Sag Channel

SECTION: From junction at Chicago Sanitary and Ship Canal to Blue Island, Illinois - 24 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	6,111,949	135,161,957
1974	6,983,482	155,253,669
1975	7,126,396	157,743,811
1976	6,466,901	141,937,480
1977	6,343,439	140,724,724
1978	6,034,231	137,123,896
1979	5,830,427	133,015,697
1980	6,042,097	137,079,097

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons	
	Coastwise and Lakewise	Inland Waterway
Grain and grain products	--	163,189
Soybeans	--	17,681
Iron ore and concentrates	--	--
Aluminum ores and concentrates	--	101,901
Manganese ore and concentrates	--	23,880
Nonferrous ores, concentrates, n.e.c.	--	18,891
Coal and lignite	--	117,437
Sand, gravel, crushed rock	--	139,508
Nonmetallic minerals, n.e.c.	--	171,085
Tallow, animal fats and oils	--	132,210
Prepared animal feeds	--	294,097
Molasses	--	39,202
Sodium hydroxide	--	45,862
Crude tar, oil, gas products	--	4,061
Alcohols	3,321	8,850
Benzene and toluene	--	49,534
Basic chemicals and products, n.e.c.	117,635	307,463
Fertilizer and fertilizer materials	31,316	249,527
Gasoline	7,532	59,493
Kerosene	2,133	--
Distillate fuel oil	144,697	32,638
Residual fuel oil	381,086	312,943
Lubricating oils and greases	2,363	45,881
Naphtha, petroleum solvents	35,620	144,474

(Continued)

Commodity	Net Tons Coastwise and Lakewise	Net Tons Inland Waterway
Asphalt, tar and pitches	30,035	6,590
Coke, petroleum coke	--	625,572
Building cement	--	--
Lime	--	158,140
Slag	--	66,789
Iron and steel products	--	1,331,261
Lead and zinc, unworked	--	3,386
Ferroalloys	1,519	170,755
Fabricated metal products	--	24,864
Iron and steel scrap	9,821	313,288
Miscellaneous	8,501	86,066
GRAND TOTAL	775,579	5,266,518

Chesapeake Bay

SECTION: From Baltimore, Maryland, to the Capes of Virginia - 200 miles

TOTAL ANNUAL DOMESTIC TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,386,658	2,370,548,397
1972	26,211,332	2,369,353,925
1973	29,569,692	2,756,580,316
1974	30,000,983	2,647,719,258
1975	26,820,368	2,312,096,563
1976	26,443,040	2,427,968,892
1977	23,549,560	1,984,596,243
1978	20,966,291	1,616,151,041
1979	20,404,507	1,599,211,051
1980	20,240,716	1,607,168,861

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Shellfish and marine shells, unmanufactured	514,348
Coal and lignite	2,482,451
Crude petroleum	194,573
Sand, gravel, crushed rock	358,984
Sugar	340,840
Basic chemicals and products, n.e.c.	319,515
Fertilizer and fertilizer materials	264,074
Gasoline	1,523,198

(Continued)

Commodity	Net Tons
Jet fuel	592,408
Kerosene	81,318
Distillate fuel oil	1,932,529
Residual fuel oil	6,987,497
Lubricating oils and greases	58,879
Naphtha, petroleum solvents	33,290
Asphalt, tar and pitches	1,016,176
Coke, petroleum coke	24,437
Liquefied gases	232
Asphalt building materials	724
Petroleum and coal products, n.e.c.	83,111
Building cement	433,136
All other commerce	2,998,996
GRAND TOTAL	20,240,716

Columbia River

SECTION: From the international boundary, south to the mouth of the Snake River, and westerly between Oregon and Washington to the mouth of the Columbia River at the Pacific Ocean - 745 miles (navigation mileage - 340)

CONTROLLING DEPTHS: 4 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,829,472	2,154,224,739
1972	31,341,190	2,688,814,828
1973	34,413,507	3,165,990,692
1974	39,149,042	3,231,365,552
1975	38,121,549	3,194,430,506
1976	41,960,981	3,630,340,960
1977	38,541,767	4,522,164,844
1978	43,724,801	4,266,839,820
1979	47,059,070	4,588,616,135
1980	49,178,984	4,885,377,980

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	12,553,923	5,268,938	17,822,861
Aluminum ore, concentrates	1,434,161	--	1,434,161

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Crude petroleum	478,116	--	478,116
Limestone	104,371	--	104,371
Sand, gravel, crushed rock	952,579	1,692,254	2,644,833
Clay and structural clay products	167,073	11,753	178,826
Fertilizer and fertilizer materials	364,988	59,585	424,573
Salt	517,395	--	517,395
Vegetables and preparations, n.e.c.	56,537	7,708	64,245
Molasses	15,256	3,729	18,985
Veg. oils, margarine, shortening	61,344	--	61,344
Logs	3,625,792	89,840	3,715,632
Rafted logs	--	6,254,550	6,254,550
Fuel wood, charcoal, wastes	11,735	129,401	141,136
Timber, posts, poles, piling	10,882	2,035	12,917
Wood chips, staves, moldings	1,536,729	863,241	2,399,970
Lumber	493,470	14	493,484
Veneer, plywood, worked wood	148,548	6,365	154,913
Pulp	74,605	294,442	369,047
Paper and paperboard	375,655	29,286	404,941
Pulp and paper products, n.e.c.	19,666	774,678	794,344
Basic chem. and products, n.e.c.	972,332	334,999	1,307,331
Gasoline	898,825	727,500	1,626,325
Jet fuel	--	30,692	30,692
Kerosene	50,809	--	50,809
Distillate fuel oil	990,034	778,737	1,768,771
Residual fuel oil	1,930,954	996,218	2,927,172
Lubricating oils and greases	77,520	--	77,520
Asphalt, tar and pitches	200,910	8,151	209,061
Other petroleum and coal products	21,835	--	21,835
Iron and steel products	454,921	150	455,071
Fabricated metal products	52,400	803	53,203
Machinery, except electrical	39,852	189	40,041
Motor vehicles, parts, equipment	364,498	20	364,518
Iron and steel scrap	309,412	--	309,412
Waste and scrap, n.e.c.	--	611,391	611,391
Miscellaneous	751,028	84,160	835,188
GRAND TOTAL	30,118,155	19,060,829	49,178,984

Cumberland River

SECTION: From the mouth near Smithland, Kentucky, at its junction with the Ohio River, to Celina, Tennessee, mile 381, present head of through navigation

CONTROLLING DEPTHS: 8 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,792,355	677,311,139
1972	8,251,271	882,020,973
1973	10,813,213	1,054,753,548
1974	11,034,025	982,502,698
1975	11,860,145	1,098,589,441
1976	11,318,873	1,085,375,760
1977	12,761,169	1,125,392,878
1978	12,396,898	989,424,876
1979	15,162,573	1,212,783,090
1980	12,348,920	1,030,866,982

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	47,545
Soybeans	122,586
Coal and lignite	6,042,856
Limestone	4,248
Nonmetallic minerals, n.e.c.	3,674,663
Sugar	4,887
Crude tar, oil, gas products	10,762
Alcohols	39,728
Sulphuric acid	48,939
Basic chemicals and products, n.e.c.	213,345
Gasoline	208,168
Jet fuel	864
Distillate fuel oil	48,994
Residual fuel oil	21,798
Lubricating oils and greases	7,056
Asphalt, tar and pitches	168,274
Naphtha, petroleum solvents	1,358
Building cement	124,774
Lime	13,135
Slag	20,525
Iron and steel products	260,630
Machinery, except electrical	6,006
Iron and steel scrap	102,628

(Continued)

Commodity	Net Tons
Waterway improvement material	1,033,152
Miscellaneous	121,999
GRAND TOTAL	12,348,920

Delaware River

SECTION: From Trenton, New Jersey, to Deepwater Point at mouth of Delaware Bay - 127 miles

CONTROLLING DEPTHS: 11.6 to 39 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	123,543,497	9,793,833,154
1972	127,207,307	9,635,344,851
1973	139,297,118	10,744,205,966
1974	143,673,501	11,437,006,814
1975	131,819,164	10,446,605,935
1976	133,696,091	10,431,934,520
1977	133,276,227	10,215,907,280
1978	132,438,907	10,234,279,723
1979	140,463,460	10,853,421,444
1980	119,309,114	9,307,766,529

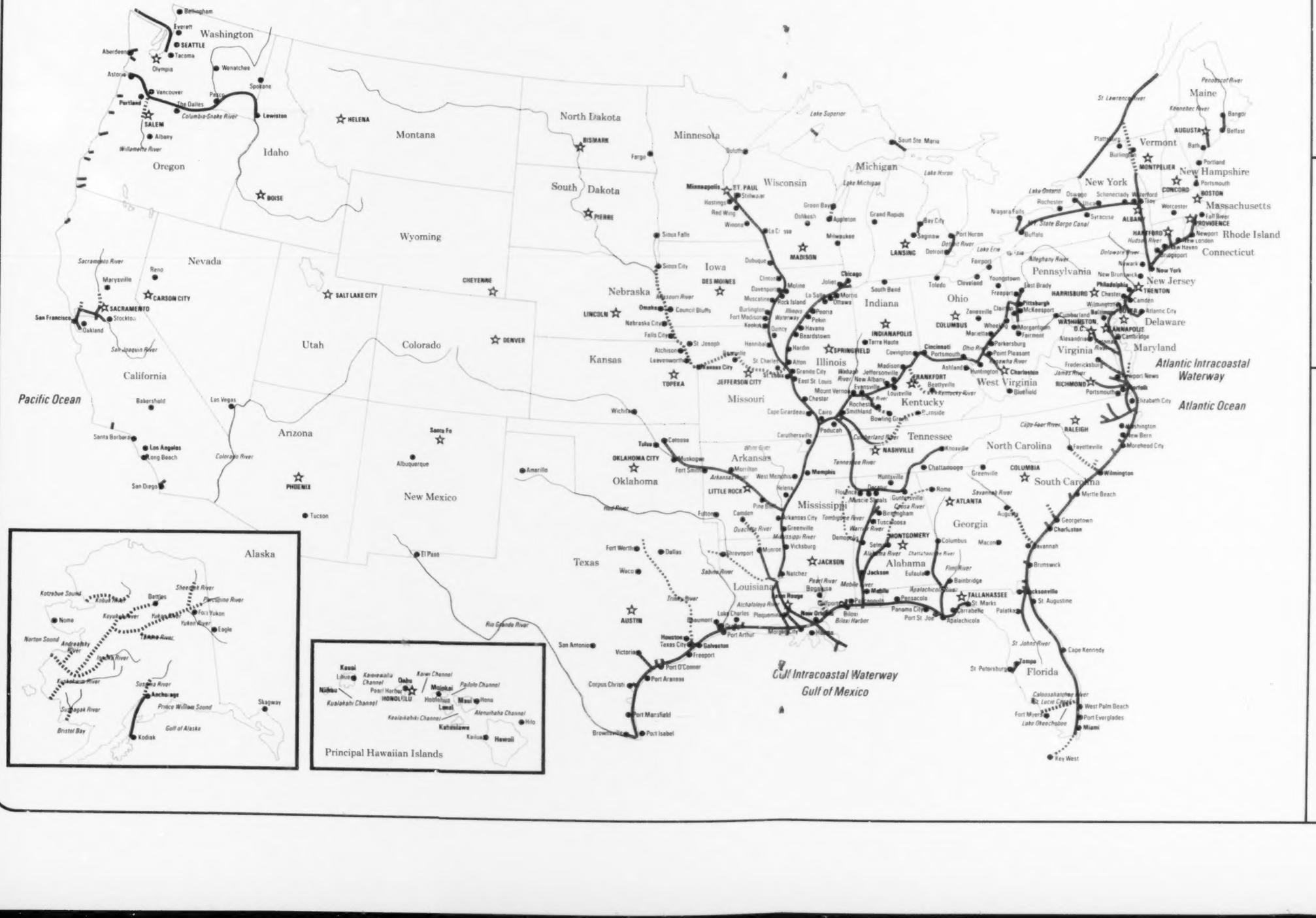
PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	2,937,948	--	2,937,948
Soybeans	578,651	--	578,651
Fresh fruit and nuts	147,542	--	147,542
Cocoa beans	48,350	--	48,350
Iron ore and concentrates	6,715,333	26,808	6,742,141
Aluminum ores and concentrates	39,668	--	39,668
Nonferrous ores, concentrates, n.e.c.	54,105	10,636	64,741
Coal and lignite	3,097,166	964,493	4,061,659
Crude petroleum	46,124,635	8,053,638	54,178,273
Limestone	934,308	--	934,308
Sand, gravel, crushed rock	6,680	--	6,680
Clay and structural clay products	71,246	--	71,246

(Continued)

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Fertilizer and fertilizer materials	62,219	38,749	100,968
Sulphur, dry and liquid	7,747	--	7,747
Nonmetallic minerals and salt, n.e.c.	79,990	--	79,990
Meat, fresh, chilled, frozen	260,181	--	260,181
Sugar	876,520	--	876,520
Molasses	3,396	--	3,396
Misc. food products	111,220	136	111,356
Basic textile products	30,336	121	30,457
Lumber	259,616	--	259,616
Veneer, plywood, worked wood	99,414	--	99,414
Pulp	245	109,142	109,387
Paper and paperboard	108,395	3,406	111,801
Sodium hydroxide	174,698	--	174,698
Crude tar, oil, gas products	33,070	689	33,759
Alcohols	49,448	2,054	51,502
Benzene and toluene	72,895	105,561	178,456
Sulphuric acid	69,020	376,167	445,187
Basic chemicals and products, n.e.c.	805,268	415,021	1,220,289
Plastic materials	52,586	--	52,586
Misc. chemical products	37,910	--	37,910
Gasoline	6,549,665	1,749,185	8,298,850
Jet fuel	285,149	453,542	738,691
Kerosene	160,595	104,031	264,626
Distillate fuel oil	4,544,901	3,971,189	8,516,090
Residual fuel oil	11,010,467	8,009,519	19,019,986
Lubricating oils and greases	1,219,838	121,362	1,341,200
Naphtha, petroleum solvents	491,886	205,329	697,215
Asphalt, tar and pitches	770,145	349,042	1,119,187
Other petroleum and coal products	1,466,913	49,984	1,516,897
Glass and glass products	47,814	--	47,814
Building cement	246,137	--	246,137
Iron and steel products	994,522	14,095	1,008,617
Lead and zinc, unworked	23,097	--	23,097
Fabricated metal products	66,773	438	67,211
Machinery, except electrical	113,264	3,797	117,061
Motor vehicles, parts, equip.	388,807	--	388,807
Iron and steel scrap	711,168	--	711,168
Nonferrous metal scrap	85,303	--	85,303
Waste and scrap, n.e.c.	--	95,642	95,642
Commodities, n.e.c.	142,010	149,528	291,538
Miscellaneous	637,440	20,110	657,550
GRAND TOTAL	93,905,700	25,403,414	119,309,114

Waterways of the United States



CONTROLLING DEPTHS

9 FEET OR MORE

UNDER 9 FEET

AUTHORIZED EXTENSIONS

PUBLISHED 1981 BY
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CORPS OF ENGINEERS, U.S. ARMY

NAVIGABLE LENGTHS AND DEPTHS[1] OF UNITED STATES WATERWAY ROUTES

LENGTH IN MILES OF WATERWAYS

GROUP	UNDER 6 FT.	6 TO 9FT.	9TO 12 FT.	12 TO 14 FT.	14 FT. AND OVER	TOTAL
Atlantic Coast Waterways (exclusive of Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.), but including New York State Barge Canal System	**1,426** 1,487	**1,241** 1,445	**584** 589	**938** 965	**1,581** 1,544	**5,768** 6,030
Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.	**–** –	**65** 160	**65** 65	**1,104** 1,104	**–** –	**1,234** 1,329
Gulf Coast Waterways (exclusive of Gulf Intracoastal Waterway from St. Marks River, Fla., to Mexican Border)	**2,055** 2,174	**647** 812	**1,135** 2,095	**79** 269	**378** 388	**4,292** 5,738
Gulf Intracoastal Waterway from St. Marks River, Fla., to Mexican Border (including Port Allen Morgan City Alternate Route)	**–** –	**–** –	**–** –	**1,137** 1,180	**–** –	**1,137** 1,180
Mississippi River System	**2,020** 4,365	**969** 1,457	**4,957** 5,062	**740** 755	**268** 268	**8,954** 11,907
Pacific Coast Waterways	**597** 700	**498** 515	**237** 237	**26** 27	**2,367** 825	**3,825** 2,554
Great Lakes	**45** 100	**89** 148	**–** 14	**5** 8	**348** 369	**490** 639
All Other Waterways (exclusive of Alaska)	**76** 76	**7** 7	**–** –	**1** 1	**7** 7	**91** 91
GRAND TOTAL	**6,352** 8,935	**3,516** 4,544	**6,976** 8,062	**4,033** 4,309	**4,666** 3,368	**25,543** 29,218

[1]The mileages shown in this table in bold type represent the lengths of all navigable channels of the United States including those improved by the Federal Government, other agencies, and those which have not been improved but are usable for commmercial navigation.

The mileages shown in this table in light type represent the lengths authorized for improvement by the Congress of the United States in legislation known as Rivers and Harbors Acts.

The sources for these tabulations are publications of the Corps of Engineers, United States Army.

Green and Barren Rivers

SECTION: Green River - From near Evansville, Indiana, at the Green River's confluence with the Ohio River, to mouth of Barren River - 149.5 miles. Barren River - From junction with Green River at Woodbury, Kentucky, to Bowling Green, Kentucky - 30 miles

CONTROLLING DEPTHS: 5 1/2 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	14,610,917	1,348,165,401
1972	16,245,729	1,467,228,335
1973	15,517,337	1,395,537,021
1974	15,639,721	1,426,247,039
1975	15,893,645	1,439,134,454
1976	13,781,231	1,203,359,390
1977	13,501,167	1,154,759,525
1978	10,080,475	812,870,554
1979	10,806,466	856,038,878
1980	9,983,135	752,427,710

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain	42,718
Soybeans	103,345
Coal and lignite	9,335,355
Basic chemicals and products, n.e.c.	405,327
Coke, petroleum coke	49,044
Miscellaneous	47,346
GRAND TOTAL	9,983,135

Gulf Intracoastal Waterway

SECTION: From Apalachee Bay (St. Marks), Florida, to Brownsville, Texas - 1108.9 miles

Alternate Route: Morgan City, Louisiana, to Port Allen, Louisiana - 64.1 miles

CONTROLLING DEPTH: 10 to 12 feet

TOTAL ANNUAL TRAFFIC

	Main Route		Alternate Route	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	105,975,450	17,767,478,670	14,368,939	854,221,099
1972	108,999,010	17,879,308,331	19,173,890	1,156,297,016
1973	100,767,257	16,578,104,685	14,269,832	871,055,019
1974	103,076,1421	17,078,855,710	15,895,856	970,581,229
1975	96,950,849	15,594,606,116	17,083,459	1,049,516,733
1976	99,085,379	16,511,685,908	18,961,414	1,160,488,912
1977	104,934,179	18,227,332,044	18,456,491	1,131,951,427
1978	102,332,582	17,506,122,885	18,066,503	1,059,821,031
1979	97,272,038	17,286,322,092	20,254,735	1,258,236,102
1980	94,512,197	16,512,229,005	19,066,976	1,176,261,961

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway	Alternate Route
Grain and grain products	15,358	722,499	50,725
Soybeans	--	448,189	33,832
Marine shells, unmanufactured	--	5,930,779	37,130
Iron ore and concentrates	--	122,621	7,615
Aluminum ore, concentrates	--	106,587	53,307
Manganese ores and concentrates	--	62,895	18,815
Nonferrous ores and concentrates	4,983	71,323	31,977
Coal and lignite	--	5,066,362	73,439
Crude petroleum	--	17,459,779	1,115,903
Limestone	--	504,424	15,261
Sand, gravel, crushed rock	--	2,489,538	96,094
Clay and structural clay products	--	676,081	53,091
Sulphur, liquid	--	611,900	36,866
Prepared animal feeds	5,302	105,446	21,666
Nonmetallic minerals including salt, n.e.c.	40,977	4,246,090	2,701,453
Sugar	--	165,961	35,840
Molasses	--	48,542	11,514
Tallow, animal oils and fats, n.e.c.	--	77,599	4,810

(Continued)

Commodity	Oceangoing	Net Tons Inland Waterway	Alternate Route
Pulpwood, log	--	115,985	--
Pulp	--	46,293	--
Paper and paperboard	--	120,673	3,555
Sodium hydroxide	89,586	1,722,566	370,689
Crude tar, oil, gas products	--	700,159	277,769
Alcohols	9,794	1,267,025	619,729
Benzene and toluene	--	1,677,054	460,475
Sulphuric acid	--	514,302	44,816
Basic chemicals and products, n.e.c.	--	7,296,892	3,881,225
Plastic materials	--	130,959	62,642
Synthetic rubber	--	46,506	5,021
Fertilizer and fertilizer materials	229,900	1,581,990	375,783
Miscellaneous chemical products	--	99,212	83,414
Gasoline	--	7,423,076	1,289,692
Jet fuel	--	1,248,578	201,573
Kerosene	--	537,597	49,647
Distillate fuel oil	60	4,623,679	748,134
Residual fuel oil	11,002	12,288,846	1,539,722
Lubricating oils and greases	--	1,423,447	813,555
Naphtha, petroleum solvents	--	2,912,276	964,761
Asphalt, tar and pitches	--	426,445	138,804
Coke, petroleum coke	--	1,193,001	180,599
Liquefied gases	3,110	521,147	156,410
Other petroleum and coal products	--	284,118	32,976
Building cement	1,212	556,969	94,836
Misc. nonmetallic mineral products	--	121,694	--
Slag	--	9,081	5,993
Iron and steel products	10,862	2,417,272	1,228,424
Ferroalloys	--	66,730	22,633
Lead and zinc, unworked	--	6,219	4,280
Aluminum and alloys, unworked	--	19,428	16,374
Fabricated metal products	758	46,031	11,439
Machinery, except electrical	4,665	63,288	3,541
Electrical machinery and equipment	5,830	111,683	105,140
Ships and boats	1,776	22,574	10,412
Miscellaneous manufactured products	--	352,199	--
Iron and steel scrap	--	1,219,452	727,266
Waste and scrap, n.e.c.	--	1,012,415	98,331
Water	--	568,520	--
Waterway improvement materials	--	16,050	5,900
Commodities, n.e.c.	--	121,203	2,800
Miscellaneous	1,450	226,323	29,278
GRAND TOTAL	436,625	94,075,572	19,066,976

Houston Ship Canal

SECTION: From Galveston Harbor, Texas, through San Jacinto River and Buffalo Bayou to turning basin at Houston, Texas - 52 miles

CONTROLLING DEPTHS: 6 to 37 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	68,423,829	2,865,468,463
1972	71,430,789	2,948,312,107
1973	88,517,992	3,741,921,450
1974	89,106,389	3,767,066,327
1975	83,674,039	3,550,923,871
1976	89,897,598	3,834,608,638
1977	104,291,267	3,285,460,564
1978	111,936,099	4,862,244,510
1979	117,550,908	5,103,845,724
1980	108,937,268	4,651,542,816

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Alcoholic beverages	--	--
Cotton	204,094	--
Grain and grain products	12,905,473	87,123
Oilseeds, n.e.c.	13,109	431
Soybeans	133,687	3,120
Coffee	81,791	983
Marine shells, unmanufactured	--	532,410
Iron ore and concentrates	1,067,805	13,223
Manganese ore, concentrates	--	14,379
Coal and lignite	3,505	4,273
Crude petroleum	25,315,885	1,840,364
Limestone	184,134	519,062
Sand, gravel, crushed rock	26,407	1,037,620
Clay and structural clay products	1,174,463	79,989
Sulphur, dry and liquid	72,779	346,361
Nonmetallic minerals, n.e.c.	89,445	58,293
Tallow, animal fats and oils	281,821	10,011
Animal by-products, n.e.c.	50,236	--
Molasses	267,170	22,109
Vegetable oils, margarine, shortening	272,518	11,009
Sodium hydroxide	318,880	505,729
Crude tar, oil, gas products	389,105	469,361
Alcohols	323,257	849,552
Benzene and toluene	131,317	1,523,495
Sulphuric acid	6,821	780,141
Basic chemicals and products, n.e.c	3,725,516	3,388,589
Plastic materials	841,128	32,549
Synthetic rubber	125,626	11,769
Fertilizer and fertilizer materials	2,688,359	497,217
Miscellaneous chemical products	478,711	25,190
Gasoline	2,541,698	2,143,421

(Continued)

Commodity	Oceangoing	Inland Waterway
Jet fuel	488,698	426,732
Kerosene	191,254	332,003
Distillate fuel oil	3,220,586	2,191,280
Residual fuel oil	6,801,084	8,249,591
Lubricating oils and greases	2,188,906	698,441
Naphtha, petroleum solvents	1,028,260	2,065,228
Asphalt, tar, and pitches	7,422	169,284
Coke, petroleum coke	69,309	112,010
Liquefied gases	746,098	104,550
Other petroleum and coal products	420,625	327,661
Rubber and misc. plastic products	69,996	--
Building cement	182,622	155,609
Iron and steel products	3,572,449	1,496,914
Fabricated metal products	299,081	15,951
Machinery, except electrical	577,527	38,391
Motor vehicles, parts, equipment	318,469	6,299
Iron and steel scrap	78,950	676,405
Waste and scrap, n.e.c.	--	1,055,718
Commodities, n.e.c.	506,374	41,655
Miscellaneous	1,356,863	126,460
GRAND TOTAL	75,839,313	33,097,955

Hudson River

SECTION: From deepwater in Upper Bay, New York, to Waterford, New York - 155 miles

CONTROLLING DEPTHS: 12 to 27 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	40,952,909	2,461,659,464
1974	38,479,579	2,260,669,818
1975	34,135,648	1,959,202,309
1976	28,308,347	1,923,483,312
1977	28,220,192	1,939,792,560
1978	30,080,559	2,035,919,276
1979	28,519,840	1,904,117,775
1980	27,383,819	1,824,844,569

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Oceangoing	Net Tons Inland Waterways	Total
Grain and grain products	446,615	--	446,615
Fresh fruit and nuts	199,279	--	199,279
Coffee	16,417	97,806	114,223
Crude petroleum	576,182	262,744	838,926
Limestone	968,221	--	968,221
Sand, gravel and crushed rock	1,045,064	4,485,056	5,530,120
Meat, fresh, chilled, frozen	47,319	--	47,319
Sugar	288,679	--	288,679
Molasses	155,471	--	155,471
Alcoholic beverages	147,645	--	147,645
Veg. oils, margarine, shortening	23,900	184,568	208,468
Miscellaneous food products	38,402	--	38,402
Basic textile products	40,456	--	40,456
Tallow, animal fats and oils	7,940	11,468	19,408
Pulp	20,604	--	20,604
Paper and paperboard	33,425	--	33,425
Sodium hydroxide	--	8,890	8,890
Crude tar, oil, gas products	109	1,359	1,468
Basic chemicals and products, n.e.c.	78,774	--	78,774
Plastic materials	78,193	--	78,193
Miscellaneous chemical products	29,803	--	29,803
Gasoline	366,538	3,335,275	3,701,813
Jet fuel	--	126,864	126,864
Kerosene	20,257	199,755	220,012
Distillate fuel oil	545,214	3,231,671	3,776,885
Residual fuel oil	2,854,001	3,064,982	5,918,983
Asphalt, tar and pitches	229,024	104,641	333,665
Other petroleum and coal products	84,078	58,965	143,043
Building cement	1,383,811	299,043	1,682,854
Iron and steel products	69,063	--	69,063
Clay and structural clay products	63,030	--	63,030
Copper alloys, unworked	15,319	3,003	18,322
Fabricated metal products	57,945	3	57,948
Machinery, except electrical	88,279	3	88,282
Electrical machinery and equipment	66,872	--	66,872
Motor vehicles, parts and equipment	88,589	--	88,589
Miscellaneous manufactured products	43,425	--	43,425
Iron and steel scrap	125,869	77,166	203,035
Waste and scrap, n.e.c.	--	633,318	633,318
Miscellaneous	814,641	38,786	853,427
GRAND TOTAL	11,158,453	16,225,366	27,383,819

New York State Barge Canal

SECTION: From Tonawanda, New York, to Whitehall, New York, including the Erie, Oswego, Cayuga, Seneca, and Champlain Canals - 522 miles

CONTROLLING DEPTHS: 12 to 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	2,548,113	246,839,392
1974	2,222,827	215,430,282
1975	1,940,772	180,725,089
1976	2,227,052	193,092,844
1977	1,826,878	166,635,083
1978	1,553,310	146,240,967
1979	1,303,337	119,115,618
1980	1,148,382	104,825,155

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Sand, gravel, crushed rock	41,430
Alcohols	23,357
Gasoline	294,233
Jet fuel	94,981
Kerosene	36,229
Distillate fuel oil	263,019
Residual fuel oil	233,737
Lubricating oils and greases	12,991
Asphalt, tar and pitches	71,026
Building cement	71,899
Machinery, except electrical	5,480
GRAND TOTAL	1,148,382

Illinois Waterway

SECTION: From Illinois River at Grafton, Illinois, to Turning Basin No. 5 on Calumet River (includes Calumet-Sag Channel) - 353.6 miles

CONTROLLING DEPTHS: 9 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	38,324,867	7,312,185,374
1972	43,970,391	8,350,419,627
1973	44,510,478	8,450,727,892
1974	45,301,607	8,825,841,497
1975	47,242,597	8,992,017,443
1976	46,853,608	8,988,507,803
1977	44,516,298	8,518,085,320
1978	41,609,086	7,683,852,338
1979	39,339,385	7,462,048,381
1980	45,526,962	8,798,705,441

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons	
	Coastwise and Lakewise	Inland Waterway
Grain and grain products	1,303	13,204,553
Soybeans	--	2,768,698
Prepared animal feeds	--	926,247
Aluminum ores and concentrates	--	101,901
Nonferrous ores and concentrates, n.e.c.	--	25,210
Coal and lignite	--	5,804,849
Crude petroleum	--	36,501
Sand, gravel, crushed rock	--	3,600,948
Fertilizer and fertilizer materials	106,841	1,634,143
Sulphur, dry and liquid	--	6,490
Nonmetallic minerals, n.e.c.	--	875,337
Tallow, animal fats and oils	--	161,868
Sugar	--	209,398
Molasses	--	57,686
Vegetable oils, margarine, shortenings	--	82,861
Veneer, plywood, worked wood	--	5,859
Pulp	--	14,410
Sodium hydroxide	--	293,981
Crude tar, oil, gas products	--	60,659
Alcohols	4,647	309,095
Benzene and toluene	--	133,450
Sulphuric acid	--	101,430

(Continued)

Commodity	Net Tons: Coastwise and Lakewise	Net Tons: Inland Waterway
Basic chemicals and products	294,024	1,738,243
Gasoline	11,276	1,219,783
Jet fuel	8,501	73,235
Distillate fuel oil	186,258	1,029,025
Residual fuel oil	699,133	1,767,237
Lubricating oils and greases	2,363	364,597
Naphtha, petroleum solvents	35,620	677,700
Asphalt, tar and pitches	43,737	247,373
Coke and petroleum coke	--	1,232,452
Other petroleum and coal products	2,133	26,495
Building cement	--	477,328
Lime	--	169,519
Slag	--	66,789
Iron and steel products	--	1,699,003
Ferroalloys	1,519	172,828
Lead and zinc, unworked	--	4,705
Fabricated metal products	--	47,408
Iron and steel scrap	9,821	695,368
Waste and scrap, n.e.c.	--	1,797,362
Miscellaneous	910	196,852
GRAND TOTAL	1,408,086	44,118,876

James River

SECTION: From Richmond, Virginia, to Hampton Roads at Newport News, Virginia - 89 miles

CONTROLLING DEPTHS: 11 to 25 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1970	7,301,413	435,709,182
1971	8,551,305	526,683,591
1972	6,554,555	408,542,427
1973	7,805,992	482,358,804
1974	7,714,515	471,973,029
1975	5,566,000	361,115,892
1976	6,192,395	396,102,080
1977	6,714,097	412,434,993
1978	7,819,573	457,071,325
1979	7,918,482	481,495,348
1980	7,853,114	468,944,[illegible]

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway	Total
Tobacco, leaf	59,768	--	59,768
Shellfish, except prepared	--	2,452	2,452
Sand, gravel, crushed rock	10,825	5,226,072	5,236,897
Sulphur, liquid	25,507	15,456	40,963
Nonmetallic minerals, n.e.c.	4,887	--	4,887
Tobacco manufactures	11,889	--	11,889
Basic textile products	7,619	--	7,619
Paper and paperboard	19,802	--	19,802
Sulphuric acid	2,930	20,680	23,610
Basic chemicals and products, n.e.c.	27,180	198,456	225,636
Plastic materials	14,035	--	14,035
Nitrogenous chemical fertilizers	441,335	232,700	674,035
Gasoline	--	142,376	142,376
Kerosene	--	14,565	14,565
Distillate fuel oil	3	223,369	223,372
Residual fuel oil	1,754	882,973	884,727
Asphalt, tar and pitches	71,286	9,999	81,285
Petroleum and coal products, n.e.c.	1,861	1,331	3,192
Machinery, except electrical	22,138	150	22,288
Electrical machinery and equipment	1,974	300	2,274
Iron and steel scrap	79,139	2,700	81,839
Miscellaneous	70,366	5,237	75,603
GRAND TOTAL	874,298	6,978,816	7,853,114

Kanawha River

SECTION: Deepwater, West Virginia, to the Kanawha River's confluence with the Ohio River at Point Pleasant, West Virginia - 91 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,169,337	796,234,247
1974	12,781,026	713,681,050
1975	12,449,424	657,277,327
1976	12,250,362	662,228,354

(Continued)

Year	Net Tons	Ton-Miles
1977	10,755,599	562,178,431
1978	10,992,616	601,519,584
1979	13,776,446	783,939,496
1980	14,673,829	872,622,577

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Manganese ores and concentrates	5,807
Coal and lignite	8,753,386
Limestone	87,066
Sand, gravel, crushed rock	1,802,913
Sulphur, liquid	10,477
Nonmetallic minerals, n.e.c.	102,624
Sodium hydroxide	46,851
Alcohols	294,976
Benzene and toluene	24,903
Sulphuric acid	16,192
Basic chemicals and products, n.e.c.	1,913,012
Miscellaneous chemical products	81,371
Gasoline	691,965
Jet fuel	30,117
Kerosene	10,521
Distillate fuel oil	296,866
Residual fuel oil	10,071
Lubricating oils and greases	15,839
Naphtha, petroleum solvents	88,261
Coke, petroleum coke	567
Building cement	99,391
Iron and steel products	12,450
Iron and steel scrap	38,282
Miscellaneous	239,921
GRAND TOTAL	14,673,829

Kaskaskia River

SECTION: Mouth at Mississippi River to mile 36.2 at Fayetteville, Illinois

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	25,236	--
1974	216,268	--
1975	194,750	--
1976	589,508	14,147,950
1977	1,286,808	31,788,700
1978	1,832,961	42,431,625
1979	1,723,453	42,918,325
1980	2,045,575	51,094,375

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Coal and lignite	2,042,175
Miscellaneous	3,400
GRAND TOTAL	2,045,575

Kentucky River

SECTION: From Carrollton, Kentucky, at the Kentucky River's confluence with the Ohio River, south to the junction of the North and Middle Forks east of Beattyville, Kentucky - 255 miles

CONTROLLING DEPTH: 6 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	777,894	52,282,252
1974	652,607	43,237,662
1975	580,481	39,416,325
1976	538,712	35,554,992
1977	465,116	30,266,386
1978	415,521	25,534,459
1979	417,947	26,883,350
1980	292,276	19,057,722

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Sand, gravel, crushed rock and limestone	292,276
GRAND TOTAL	292,276

McClellan-Kerr Arkansas River Navigation System

SECTION: From confluence of White and Mississippi Rivers to Catoosa, Oklahoma, via White River, Arkansas Post Canal, Arkansas, and Verdigris Rivers - 448 miles

CONTROLLING DEPTH: Minimum - 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1972	5,337,370	520,887,271
1973	4,955,789	338,623,935
1974	6,000,443	451,108,827
1975	5,156,562	430,977,451
1976	6,538,434	778,259,780
1977	9,145,956	1,297,556,979
1978	9,851,932	1,694,929,503
1979	8,411,173	1,472,861,443
1980	8,461,411	1,819,076,183

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	930,578
Soybeans	691,410
Aluminum ores, concentrates	170,804
Coal and lignite	719,441
Sand, gravel, crushed rock	2,173,044
Fertilizer and fertilizer materials	628,602
Prepared animal feeds	147,469
Molasses	14,252
Logs	12,348
Paper and paperboard	61,083
Pulp and paper products, n.e.c.	88,178
Sodium hydroxide	185,945
Alcohols	1,396
Basic chemicals and products, n.e.c.	149,445
Gasoline	16,176
Distillate fuel oil	185,194
Residual fuel oil	1,442,481
Asphalt, tar and pitches	8,860
Other petroleum and coal products	119,830
Slag	22,720
Iron and steel products	386,261
Fabricated metal products	27,771
Iron and steel scrap	47,679
Waterway improvement materials	33,382
Miscellaneous	197,062
GRAND TOTAL	8,461,411

Minnesota River

SECTION: Mouth to Shakopee, Minnesota - 25.6 miles

CONTROLLING DEPTH: 9 feet to mile 14.7

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,626,132	--
1972	4,314,833	--
1973	4,284,012	--
1974	4,773,630	--
1975	3,842,850	--
1976	3,898,291	54,693,553
1977	3,407,261	46,533,312
1978	2,078,067	28,866,981
1979	1,198,086	16,238,965
1980	2,713,844	38,219,169

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	1,383,911
Soybeans	487,919
Coal and lignite	509,435
Nonmetallic minerals, n.e.c.	166,821
Vegetable oils, margarine, shortening	3,151
Fertilizer and fertilizer materials	113,204
Petroleum products	8,834
Iron and steel products	19,112
Miscellaneous	21,457
GRAND TOTAL	2,713,844

Upper Mississippi River

SECTION: From Minneapolis, Minnesota, to the mouth of the Missouri River - 663 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterway		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1973	57,818,045	10,873,575,077	246,153	5,626,401
1974	61,747,186	11,700,427,879	266,458	7,122,004
1975	63,080,102	11,293,894,600	158,565	8,620,861
1976	68,276,914	11,688,260,904	143,393	8,289,820
1977	67,020,864	11,380,455,846	197,278	13,848,016
1978	68,816,214	12,908,444,194	160,167	12,562,943
1979	68,506,059	13,269,369,817	108,603	2,497,869
1980	76,308,307	15,155,731,244	86,572	1,991,156

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Net Tons

Commodity	Oceangoing	Inland Waterway
Grain and grain products	1,303	32,223,818
Soybeans	--	7,493,770
Oilseeds, n.e.c.	--	93,431
Ores, concentrates, n.e.c.	--	296,884
Coal and lignite	--	7,002,067
Crude petroleum	--	511,614
Limestone	--	45,399
Sand, gravel, crushed rock	--	2,754,711
Sulphur, liquid	--	5,140
Nonmetallic minerals, n.e.c.	--	1,555,716
Tallow, animal fats and oils	--	198,879
Prepared animal feeds	--	1,770,470
Sugar	--	216,491
Molasses	--	151,101
Vegetable oils, margarine, shortening	--	451,515
Sodium hydroxide	--	400,051
Crude tar, oil, gas products	--	64,674
Alcohols	--	315,901
Benzene and toluene	--	282,887
Sulphuric acid	--	52,480
Basic chemicals and products n.e.c.	--	2,166,996
Fertilizer and fertilizer materials	84,559	3,352,676
Gasoline	--	2,617,394
Jet fuel	--	150,269
Distillate fuel oil	--	1,396,085
Residual fuel oil	--	2,463,704
Lubricating oils and greases	--	505,052
Naphtha, petroleum solvents	--	774,318
Asphalt, tar and pitches	--	862,419
Coke, petroleum coke	--	1,248,381
Liquefied gases	--	--
Other petroleum and coal products	--	74,906
Building cement	--	1,227,701
Lime	--	159,576
Slag	--	125,604

(Continued)

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway
Iron and steel products	--	1,825,764
Ferroalloys	--	172,640
Fabricated metal products	--	42,691
Machinery, except electrical	--	50,520
Iron and steel scrap	--	633,055
Waterway improvement material	--	284,379
Miscellaneous	710	287,178
GRAND TOTAL	86,572	76,308,307

Mississippi River

SECTION: From Minneapolis, Minnesota, to the Mouth of Passes - 1,837 miles

CONTROLLING DEPTH: 9 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Oceangoing	Inland Waterway	Total
	Net Tons		
1972	93,174,371	178,806,043	271,980,414
1973	102,345,760	174,001,136	276,346,896
1974	112,754,958	189,834,656	302,589,614
1975	123,325,607	187,913,877	311,239,484
1976	152,855,495	203,328,232	356,183,727
1977	185,282,919	211,488,297	396,771,216
1978	197,563,541	215,502,119	413,065,660
1979	212,169,751	218,000,928	430,170,679
1980	218,642,927	222,901,151	441,544,078
	Ton-Miles		
1972	14,021,094,636	93,455,455,377	107,476,550,013
1973	15,478,890,445	91,479,128,715	106,958,019,160
1974	17,328,836,147	99,883,317,438	117,212,153,585
1975	19,401,952,194	99,715,863,367	119,117,815,561
1976	24,656,411,741	110,565,437,157	135,220,848,898
1977	29,911,859,876	109,554,793,105	139,466,652,981
1978	32,324,017,168	118,165,016,318	150,489,033,486
1979	34,339,939,056	120,669,619,515	155,009,558,571
1980	35,438,232,484	133,294,646,187	168,732,878,671

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Grain and grain products	41,489,634	45,585,737	87,075,371
Soybeans	15,373,767	15,343,637	30,717,404
Oilseeds, n.e.c.	103,233	138,451	241,684
Coffee	254,894	8,153	263,047
Marine shells, unmanufactured	--	1,786,830	1,786,830
Crude rubber and allied gums	152,983	226	153,209
Iron ores and concentrates	175,939	246,897	422,836
Aluminum ores and concentrates	7,521,357	480,420	8,001,777
Manganese ores and concentrates	390,653	330,524	721,177
Nonferrous ores, concentrates, n.e.c.	612,345	603,950	1,216,295
Coal and lignite	6,820,707	28,422,127	35,242,834
Crude petroleum	81,245,372	14,099,771	95,345,143
Limestone	164,166	538,186	702,352
Sand, gravel, crushed rock	16,417	6,803,576	6,819,993
Clay and structural clay products	996,684	457,957	1.454,641
Sulphur, dry and liquid	2,304,044	2,635,450	4,939,494
Nonmetallic minerals, n.e.c.	220,866	4,587,656	4,808,522
Tallow, animal fats and oils	684,465	374,894	1,059,359
Prepared animal feeds	11,125,055	4,221,714	15,346,769
Sugar	2,000,556	527,827	2,528,383
Molasses	260,939	350,521	611,460
Veg. oils, margarine, shortening	1,460,343	1,232,080	2,692,423
Logs	78,500	322,667	401,167
Pulpwood, log	--	10,983	10,983
Lumber	97,084	44,903	141,987
Veneer, plywood, worked wood	73,895	8,541	82,436
Pulp	513,605	222,252	735,857
Paper and paperboard	589,622	264,717	854,339
Sodium hydroxide	274,380	2,278,813	2,553,193
Crude tar, oil, gas products	14,139	591,554	605,693
Alcohols	243,045	1,395,174	1,638,219
Benzene and toluene	74,344	1,248,687	1,323,031
Sulphuric acid	7,090	686,127	693,217
Basic chemicals & products, n.e.c.	3,228,071	11,663,786	14,891,857
Plastic materials	126,913	85,924	212,837
Synthetic rubber	26,596	54,875	81,471
Fertilizer & fertilizer materials	11,268,912	7,866,591	19,135,503
Miscellaneous chemical products	184,564	126,545	311,109
Gasoline	4,628,483	11,861,986	16,490,469
Jet fuel	546,715	1,098,667	1,645,382
Kerosene	118,314	295,539	413,853
Distillate fuel oil	3,846,560	7,657,806	11,504,366
Residual fuel oil	9,351,455	19,268,185	28,619,640
Lubricating oils & greases	1,490,586	1,790,031	3,280,617
Naphtha, petroleum solvents	470,631	2,252,920	2,723,551
Asphalt, tar and pitches	59,829	1,496,589	1,556,418
Coke, petroleum coke	1,988,875	2,996,296	4,985,171

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Liquefied gases	157,893	917,060	1,074,953
Other petroleum & coal products	463,896	188,875	652,771
Building cement	29,184	2,531,149	2,560,333
Lime	567	408,974	409,541
Slag	--	274,369	274,369
Iron and Steel products	2,432,911	4,613,993	7,046,904
Copper alloys, unworked	96,790	11,113	107,903
Ferroalloys	667,983	694,365	1,362,348
Lead & zinc, unworked	56,649	36,743	93,392
Aluminum & alloys, unworked	221,621	53,402	275,023
Fabricated metal products	167,219	144,948	312,167
Machinery, except electrical	250,069	133,654	383,723
Electrical machinery & equipment	82,592	117,508	200,100
Motor vehicles, parts, equipment	51,068	8,844	59,912
Ships and boats	18,315	30,990	49,305
Miscellaneous manufactured products	4,032	145,232	149,264
Iron and steel scrap	497,158	1,882,891	2,380,049
Nonferrous metal scrap	79,275	19,748	99,023
Waste and scrap, n.e.c.	--	150,065	150,065
Water	--	339,081	339,081
Waterway improvement materials	--	5,388,335	5,388,335
Miscellaneous	689,078	443,070	1,132,148
GRAND TOTAL	218,642,927	222,901,151	441,544,078

Missouri River

SECTION: From Fort Benton, Montana, to the mouth of the Missouri River - 2073.2 miles

CONTROLLING DEPTHS: 7.5 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	7,483,708	1,329,899,221
1972	7,182,841	1,280,384,981
1973	6,370,838	884,405,933
1974	7,673,084	1,227,524,876
1975	6,208,426	1,105,811,014
1976	6,552,949	1,535,911,975
1977	6,734,850	1,596,283,935
1978	7,929,184	1,528,614,096
1979	7,684,738	1,518,549,496
1980	5,914,775	1,335,308,949

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	1,039,099
Soybeans	164,102
Sand, gravel, crushed rock	2,715,231
Nonmetallic minerals, n.e.c.	140,239
Tallow, animal fats and oils	35,746
Prepared animal feeds	326,126
Molasses	69,146
Vegetable oils, margarine, shortening	38,831
Sodium hydroxide	11,464
Alcohols	17,658
Basic chemicals and products, n.e.c.	5,843
Gasoline	56,391
Other petroleum and coal products	119,918
Coke, petroleum coke	139,523
Fertilizer and materials	455,893
Building cement	146,654
Iron and steel products	95,461
Waterways improvement materials	290,265
Iron and steel scrap	20,236
Miscellaneous	26,949
GRAND TOTAL	5,914,775

Monongahela River

SECTION: From Pittsburgh, Pennsylvania, at the Monongahela River's confluence with the Ohio and Allegheny Rivers to Fairmont, West Virginia - 129 miles

CONTROLLING DEPTHS: 7 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	35,670,419	1,420,170,445
1972	38,624,403	1,527,938,779
1973	37,592,584	1,494,803,894
1974	38,265,899	1,641,720,394
1975	37,268,425	1,538,912,980
1976	36,489,211	1,519,897,770
1977	34,420,145	1,351,745,761
1978	31,673,799	1,223,814,273
1979	38,222,785	1,590,765,057
1980	34,310,879	1,507,005,929

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Limestone	513,723
Iron ore and concentrates	46,478
Manganese ores and concentrates	164,425
Coal and lignite	28,710,664
Sand, gravel, crushed rock	1,218,446
Nonmetallic minerals, n.e.c.	178,913
Crude tar, oil, gas products	129,195
Benzene and toluene	100,159
Sulphuric acid	33,902
Basic chemicals and products, n.e.c.	119,579
Gasoline	725,535
Kerosene	23,492
Distillate fuel oil	485,314
Residual fuel oil	193,620
Lubricating oils and greases	8,449
Asphalt, tar and pitches	182,568
Coke, petroleum coke	211,804
Building cement	56,858
Iron and steel products	871,397
Ferroalloys	71,204
Fabricated metal products	4,151
Iron and steel scrap	206,177
Miscellaneous	54,826
GRAND TOTAL	34,310,879

Ohio River

SECTION: From Pittsburgh, Pennsylvania, at junction of Allegheny and Monongahela Rivers, to the Ohio River's confluence with the Mississippi River at Cairo, Illinois - 981 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterways		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	133,335,784	30,896,445,937	28,121	9,038,912
1972	138,848,346	32,055,617,509	29,346	10,849,428
1973	135,724,305	29,925,212,855	36,170	16,984,756
1974	139,258,864	31,929,318,977	35,349	15,765,982
1975	140,038,398	32,313,473,639	19,916	6,940,114
1976	148,394,558	34,358,944,032	23,252	12,704,985
1977	151,372,496	37,453,616,476	30,121	13,815,683
1978	152,558,561	38,823,847,854	12,456	5,790,596
1979	165,311,190	43,396,484,098	9,729	4,678,032
1980	155,890,711	38,704,564,475	16,008	9,287,078

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979-80

Commodity	1979 Net Tons	1980 Net Tons
Grain and grain products	6,914,540	6,080,365
Soybeans	1,635,501	2,340,500
Iron ores and concentrates	773,572	112,879
Aluminum ore, concentrates	169,735	18,881
Manganese ores and concentrates	803,777	436,002
Nonferrous ores, concentrates, n.e.c.	545,171	399,805
Coal and lignite	83,120,445	85,194,498
Crude petroleum	728,463	561,979
Limestone	1,478,408	1,953,744
Sand, gravel, crushed rock	21,556,428	15,402,897
Clay and structural clay products	109,620	79,015
Sulphur liquid	194,157	74,262
Nonmetallic minerals, n.e.c.	2,278,814	2,097,101
Prepared animal feeds	235,509	455,160
Sugar	26,958	17,790
Molasses	46,572	46,634
Vegetable oils, margarine, shortening	375,687	371,398
Standard newsprint paper	16,557	6,908
Paper and paperboard	16,594	14,275
Sodium hydroxide	493,337	450,711
Crude tar, oil, gas products	749,538	596,908
Alcohols	926,777	724,441
Benzene and toluene	477,248	401,142
Sulphuric acid	227,173	149,861
Basic chemicals and products, n.e.c.	7,281,903	7,402,794
Plastic materials	88,649	71,030
Fertilizer and fertilizer materials	1,479,591	1,500,479
Miscellaneous chemical products	179,088	134,620
Gasoline	8,028,829	8,066,722
Jet fuel	923,423	1,153,227
Kerosene	294,656	169,346
Distillate fuel oil	4,781,602	4,476,412
Residual fuel oil	3,624,698	3,047,414
Lubricating oils and greases	758,080	819,010
Naphtha, petroleum solvents	380,066	391,322
Asphalt, tar and pitches	1,872,972	1,322,827
Coke, petroleum coke	725,749	881,595
Liquefied gases	17,177	18,020
Other petroleum and coal products	43,345	17,324
Glass and glass products	22,448	9,934
Building cement	1,157,183	945,579
Lime	847,656	931,389
Pig iron	99,447	46,985
Slag	156,976	364,562
Ferroalloys	755,446	573,463
Iron and steel products	3,484,458	2,594,738
Copper alloys, unworked	814	1,060
Lead and zinc, unworked	64,937	13,857
Aluminum and alloys, unworked	47,322	44,845
Fabricated metal products	78,562	65,214
Machinery, except electrical	116,936	70,911

(Continued)

Commodity	1979 Net Tons	1980 Net Tons
Electrical machinery and equipment	86,881	115,565
Ships and boats	654	30,242
Iron and steel scrap	675,965	727,227
Waste and scrap, n.e.c.	2,793	952
Waterway improvement materials	3,141,371	1,733,869
Miscellaneous	200,661	177,029
GRAND TOTAL	165,320,919	155,906,719

Ouachita-Black Rivers

SECTION: From Camden, Arkansas, on the Ouachita River to the mouth of Black River at the confluence with Red River in Louisiana - 336 miles

CONTROLLING DEPTH: 9 feet to Sterlington, Louisiana (193 miles); 6.5 feet from Sterlington to Camden, Arkansas (143 miles)

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	584,466	55,890,918
1972	839,221	101,949,140
1973	749,836	108,551,284
1974	946,439	111,889,529
1975	957,881	117,770,724
1976	1,350,877	151,031,845
1977	1,041,580	135,976,136
1978	1,084,940	126,443,942
1979	1,170,215	148,559,409
1980	814,152	97,406,594

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	13,931
Soybeans	232,640
Crude petroleum	110,148
Sand, gravel, crushed rock	24,902
Logs	17,600
Crude tar, oil, gas products	14,745
Alcohols	5,424
Benzene and toluene	16,958
Basic chemicals and products. n.e.c.	21,008
Gasoline	22,544
Distillate fuel oil	27,670
Residual fuel oil	288,556

(Continued)

Commodity	Net Tons
Other petroleum products	4,275
Miscellaneous	13,751
GRAND TOTAL	814,152

Potomac River

SECTION: From mouth to Giesboro Point at Washington, DC - 108 miles (includes Broad Creek, Nanjemoy Creek, Mattox Creek, Chicamuxen Creek, St. Clement Bay and Piscataway Creek)

CONTROLLING DEPTH: 20.5 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	8,639,605	477,296,971
1972	7,659,645	455,533,983
1973	8,074,656	578,515,157
1974	6,633,521	454,974,710
1975	5,205,169	354,303,374
1976	6,037,072	418,064,030
1977	6,476,344	444,774,563
1978	5,427,858	392,993,107
1979	5,204,930	330,586,279
1980	4,292,350	272,325,315

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Fresh fish, except shellfish	--	1,279	1,279
Shellfish, except prepared	--	11,269	11,269
Marine shells, unmanufactured	--	55,565	55,565
Paper and paperboard	173,024	--	173,024
Gasoline	29,075	82,374	111,449
Jet fuel	12,584	183,360	195,944
Distillate fuel oil	--	395,919	395,919
Residual fuel oil	1,101,712	1,780,181	2,881,893
Asphalt, tar and pitches	70,433	395,531	465,964
Miscellaneous	44	--	44
GRAND TOTAL	1,386,872	2,905,478	4,292,350

Sacramento River

SECTION: From mouth of river to Red Bluff via River route. (Includes commerce of Sacramento River Deepwater Ship Channel and the Port of Sacramento, California) - 248 miles

CONTROLLING DEPTHS: 6 to 29 feet; Port of Sacramento - 30 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	4,920,485	168,137,575
1972	1,770,489	74,453,737
1973	2,044,519	95,705,437
1974	1,485,044	61,407,313
1975	1,788,843	72,719,306
1976	1,756,051	69,809,319
1977	1,602,291	64,389,057
1978	1,760,717	77,941,127
1979	2,065,089	90,088,944
1980	2,964,769	126,155,240

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	1,420,163	--	1,420,163
Oilseeds, n.e.c.	--	--	--
Sand, gravel, crushed rock	--	15,667	15,667
Prepared animal feeds	87,181	--	87,181
Pulp	17,851	--	17,851
Logs	87,921	--	87,921
Wood chips, staves, moldings	723,513	--	723,513
Fertilizer and fertilizer materials	200,174	--	200,174
Basic chemicals and products, n.e.c.	250,708	--	250,708
Coke, petroleum coke	146,244	--	146,244
Iron and steel products	4,125	--	4,125
Miscellaneous	10,922	300	11,222
GRAND TOTAL	2,964,769	15,967	2,964,769

San Joaquin River

SECTION: From Stockton, California, to the mouth of San Joaquin River at Suisun Bay - 45 miles. From Stockton Channel to Hills Ferry - 86 miles

CONTROLLING DEPTHS: 3 to 30 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	6,839,741	201,473,386
1972	3,025,392	70,315,229
1973	3,706,593	81,336,734
1974	3,722,780	69,014,909
1975	4,124,421	84,296,941
1976	4,643,914	69,770,870
1977	3,507,137	70,881,198
1978	2,638,522	70,260,649
1979	3,104,550	74,480,203
1980	3,920,171	101,568,571

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

	Net Tons		
Commodity	Oceangoing	Inland Waterway	Total
Cotton, raw	22,118	--	22,118
Grain and grain products	705,715	--	705,715
Oilseeds, n.e.c.	4,371	--	4,371
Limestone	469,063	--	469,063
Sand, gravel, crushed rock	38,745	737,076	775,821
Ores and concentrates	71,793	--	71,793
Sulphur, dry	177,353	--	177,353
Clay and structural clay products	75,127	--	75,127
Salt	--	186,480	186,480
Prepared animal feeds	39,355	--	39,355
Molasses	--	--	--
Sodium hydroxide	2,400	--	2,400
Alcohols	--	--	--
Basic chemicals and products, n.e.c.	200,906	--	200,906
Fertilizer and fertilizer materials	275,166	--	275,166
Jet fuel	95,062	--	95,062
Lubricating oils and greases	246	--	246
Residual fuel oil	25,418	--	25,418
Coke, petroleum coke	510,636	--	510,636

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Cement	83,886	--	83,886
Iron and steel scrap	115,438	--	115,438
Nonferrous metal scrap	9,947	--	9,947
Miscellaneous	71,870	2,000	73,870
GRAND TOTAL	2,994,615	925,556	3,920,171

Snake River

OREGON, WASHINGTON AND IDAHO

SECTION: Mouth of Snake River to Johnson Bar Landing, Idaho

CONTROLLING DEPTH: 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	975,489	--
1972	1,735,391	--
1973	1,760,943	--
1974	1,729,725	--
1975	2,010,721	--
1976	2,894,606	210,093,845
1977	2,911,249	214,892,369
1978	3,852,302	319,423,288
1979	4,356,735	333,137,838
1980	5,063,613	375,625,088

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain	3,582,971
Logs	72,003
Newsprint paper	8,072
Paper and paperboard	27,922
Pulp and paper products, n.e.c.	1,153
Basic chemicals and products, n.e.c.	30,547
Nitrogenous chemical fertilizers	26,297

Continued)

Commodity	Net Tons
Gasoline	397,871
Jet fuel	30,692
Distillate fuel oil	229,281
Residual fuel oil	21,693
Asphalt, tar and pitches	7,679
Waste and scrap, n.e.c.	611,350
Miscellaneous	16,082
GRAND TOTAL	5,063,613

Tennessee River

SECTION: From the junction of French and Holston Rivers at Knoxville, Tennessee, to the Tennessee River's confluence with the Ohio River at Paducah, Kentucky - 650 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	27,685,211	3,960,491,547
1972	28,529,732	3,755,867,106
1973	29,346,595	3,928,498,660
1974	27,123,623	3,578,808,825
1975	28,316,539	3,915,824,883
1976	26,254,165	3,663,744,641
1977	26,583,240	3,747,588,855
1978	31,634,492	4,416,600,076
1979	31,398,039	5,061,973,955
1980	29,396,552	5,330,099,702

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons
Grain and grain products	2,229,494
Soybeans	532,030
Manganese ores and concentrates	112,507
Nonferrous ores and concentrates, n.e.c.	215,744
Coal and lignite	15,465,438
Limestone	727,799
Sand, gravel, crushed rock	1,753,512
Nonmetallic minerals, n.e.c.	742,929
Prepared animal feeds	133,734
Vegetable oils, margarine, shortening	127,455

(Continued)

Commodity	Net Tons
Pulpwood, log	511,498
Pulp	88,311
Paper and paperboard	126,370
Sodium hydroxide	253,976
Crude tar, oil and gas products	136,405
Alcohols	53,516
Sulphuric acid	78,227
Basic chemicals and products, n.e.c.	1,478,621
Fertilizer and fertilizer materials	371,607
Miscellaneous chemical products	111,544
Gasoline	649,251
Jet fuel	1,764
Distillate fuel oil	488,177
Residual fuel oil	285,081
Lubricating oils and greases	30,977
Asphalt, tar and pitches	412,697
Coke, petroleum coke	185,372
Liquefied gases	18,020
Other petroleum and coal products	24,649
Glass and glass products	1,670
Building cement	203,853
Slag	20,525
Iron and steel products	475,532
Ferroalloys	123,782
Aluminum and alloys, unworked	9,684
Fabricated metal products	29,651
Machinery, except electrical	15,722
Electrical machinery and equipment	113,353
Iron and steel scrap	152,027
Waterway improvement materials	676,672
Miscellaneous	227,376
GRAND TOTAL	29,396,552

Willamette River

SECTION: From Corvallis, Oregon, to the Willamette River's confluence with the Columbia River at Portland, Oregon - 132 miles

CONTROLLING DEPTHS: 2.5 to 8 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,277,592	23,248,472
1972	4,683,635	20,639,560
1973	4,411,295	20,227,999

(Continued)

Year	Net Tons	Ton-Miles
1974	5,985,994	27,240,208
1975	4,999,407	21,538,874
1976	5,675,462	23,451,846
1977	5,186,344	60,233,056
1978	5,740,725	24,516,162
1979	4,999,732	23,612,153
1980	5,486,842	23,519,397

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1980

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Clay and clay products	--	43,127	43,127
Limestone	92,219	--	92,219
Sand, gravel, crushed rock	435,526	3,458,486	3,894,012
Grain mill products, n.e.c.	--	7,995	7,995
Rafted logs	--	404,274	404,274
Wood chips, staves, moldings	--	155,713	155,713
Pulp	--	27,830	27,830
Pulp and paper products, n.e.c.	--	775,941	775,941
Residual fuel oil	--	58,004	58,004
Basic chemicals and products, n.e.c.	--	489	489
Miscellaneous	5,717	21,521	27,238
GRAND TOTAL	533,462	4,953,380	5,486,842

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